101-105 WEST STREET (DAR SITE ID # 135)

Address:	101-105 West Street, Brooklyn, New York 11222
Tax Lot Parcel(s):	Brooklyn Block 2556, Lot 57 and 58
Latitude:	40.730181
Longitude:	-73.959573
Regulatory Programs/ Numbers/Codes:	NYSDEC VCP Code V00231
Analytical Data Status:	☐ Electronic Data Available ☒ Hardcopies only ☐ No Data Available

1 SUMMARY OF CONSTITUENTS OF POTENTIAL CONCERN (COPCs) TRANSPORT PATHWAYS TO THE CREEK

The current understanding of the transport mechanisms of COPCs from the upland portions of the 101-105 West Street site (site) to Newtown Creek is summarized in this section and Table 1, and supported in the following sections.

Overland Transport

The site is located approximately 0.3 mile south of Newtown Creek and associated waterways. This is not a complete current or historical pathway to the creek.

Bank Erosion

The site is not adjacent to Newtown Creek and associated waterways. This is not a complete current or historical pathway to the creek.

Groundwater

Groundwater is approximately 8 to 10 feet below ground surface (bgs) and flows in a northwesterly direction toward the East River which is approximately 500 feet to the west of the site (ECI 1997). This is not a complete current or historical pathway.

Overwater Activities

The site is not adjacent to Newtown Creek and associated waterways. Information regarding overwater activities was not identified in documents available for review. This is not a complete current or historical pathway to the creek.

Stormwater/Wastewater Systems

Information regarding on-site stormwater management and infrastructure was not identified in documents available for review. This site is within the Newtown Creek Water Pollution Control Plant (WPCP) sewershed. Stormwater and wastewater discharges from the site flow into a combined municipal sewer system. When the combined flows exceed the system's capacity, untreated combined sewer overflows (CSOs) are discharged to the East River (NYCDEP 2007). Discharge to sewer/CSO and direct discharge of stormwater and wastewater are not a complete current or historical pathways to the creek.

Air Releases

Information related to air discharges was not identified in documents available for review. There is insufficient evidence to make an historical or current pathway determination.

2 PROJECT STATUS

In 1999 the site entered New York's Voluntary Cleanup Program (VCP), based on the presence of metals, polycyclic aromatic hydrocarbons (PAHs), and volatile organic compounds (VOCs) found during a 1997 site assessment. After the completion of the VCP Remedial Action in 2002, the site was issued a No Further Action Memorandum. The site is listed under the New York State Department of Environmental Conservation (NYSDEC) VCP as a "Class C" site (i.e., the classification used for sites where the NYSDEC has determined that remediation has been satisfactorily completed under a remedial program). A summary of investigation and remedial activities at the site is provided in the following table:

Activity		Date(s)/Comments
Phase 1 Environmental Site Assessment	☒	1997/ Completed by ECI (ECI 1997)
Site Characterization	☐	
Remedial Investigation	☒	1999/ Soil borings and wells installed by ECI and AEAE (ECI 1999b)
Remedy Selection	☐	
Remedial Design/Remedial Action Implementation	☒	1999/ Remedial Work Plan for VCP (ECI 1999b)
Use Restrictions (Environmental Easements or Institutional Controls)	☐	
Construction Completion	☒	2002/ Remedial Action Report (HTE 2002)
Site Closeout/No Further Action Determination	☒	2002/ NYSDEC NFA memorandum (Harrington 2002)

Notes:
AEAE – American Environmental Assessment Corporation
ECI – Environmental Concepts, Inc.
HTE – Hydro Tech Environmental, Corp.
NFA – No Further Action
NYSDEC – New York State Department of Environmental Conservation
VCP – Voluntary Cleanup Program

- NYSDEC Site Code(s): NYSDEC VCP Code V00231
- NYSDEC Site Manager: Ioana Munteanu-Ramnic
- Previously: Christine Costopoulous

3 SITE OWNERSHIP HISTORY

Respondent Member: ☐ Yes ☒ No

Owner	Years	Occupant	Type of Operation
Brooklyn Ferry Co. of New York	Unknown – 1912	C. W. Wilson & Company (ca. 1887)	Lumber storage yard
Tenth & 23rd Ferry Co.	1912 – 1924	Unknown	Unknown
Eberhard Faber Pencil Co.	1924 – 1957		Private garage(s)
Perlen Ale	1957 – 1958		Unknown
Oak-Cal Realty Corporation c/o Bushwick Iron and Steel Company	1958 – 1997		Unknown
Laurel Hill Realty Corporation	1997 – 2006	Safeway Construction Enterprises Inc. (1994 – 2002+)	Construction equipment, vehicles and materials storage
Web Realty International, LLC & West Water, LLC	2006 – 2007		
93 Waterfront, LLC	2007 – present		

Note:
ca. – circa
Additional discussion and sources provided in Section 6

4 PROPERTY DESCRIPTION

101-105 West Street occupies approximately 0.2 acres[1] located approximately 500 feet east of the East River and 0.3 mile south of Newtown Creek in the Greenpoint neighborhood of Brooklyn. The site is approximately 12 feet above mean sea level. There is a gradual regional slope down to the west and the East River. The site is a lot used for storing construction equipment_(See Figure 1). The site is zoned for residential development. Surrounding and adjoining properties are in residential, commercial, or light manufacturing use (ECI 1999b; NYCDCP 2011).

[1] Acreage is an approximation of the site tax parcel using geographic information system data.

5 CURRENT SITE USE

The site is owned by 93 Waterfront, LLC and used by Safeway Construction Enterprises Inc. for the storage of construction materials and equipment including dump trucks, backhoes, road plates, lumber, rebar, and gravel (NYCDCP 2011; NYSDEC 2012; ECI 1997, 1999b).

6 SITE USE HISTORY

In 1887, the site and the western and northern adjoining properties were occupied by the C. W. Wilson & Company's lumber yard. A lumber storage building and stable were present on the site. The Greenpoint Ferry Company Terminal was located further west, adjacent to the East River (Sanborn 1887). In 1905, the C.W. Wilson & Company's lumber yard had discontinued operations on the northern-adjoining site but continued to occupy the site and the western adjoining site. An office, stable, lumber shed, and tool house were present on the site. The ferry terminal, operated by the Brooklyn Ferry Co. of New York, was present to the west, adjacent to the East River (Sanborn1905).

In 1912, the Brooklyn Ferry Co. of New York sold the site to the Tenth & 23rd Street Ferry Co. (ECI 1997). In 1916, two "shelters" were present on the property (Sanborn 1916). Note that the ECI Phase I report (1997) stated that the 1916 Sanborn Map showed two "smelters" and a lumber shed on the site. However, review of the map determined that the notation was "shelter" rather than "smelter."

In 1924, the Tenth & 23rd Street Ferry Co. sold the site to the Eberhard Faber Pencil Co (ECI 1997). The Eberhard Faber Pencil Company operated a factory on the east side of West Street (across from the site) between 1872 and 1956. In 1942, the site was occupied by two automobile garages (Sanborn 1942). By 1951, there was a warehouse/garage and paper storage building on the corner of West Street and Kent Street (Sanborn 1951; HTE 2002). The Eberhard Faber Pencil Co. sold the site to Perlen Ale in 1957.

In 2007, eight buildings on six tax lots were designated as the Eberhard Faber Pencil Company Historic District. The site was not included in the historical designation (NYCLPC 2007).

7 CURRENT AND HISTORICAL AREAS OF CONCERN AND COPCs

The current understanding of the historical and current potential upland and overwater areas of concern at the site is summarized in Table 1. The following sections provide brief discussion of the potential sources and COPCs at the site requiring additional discussion.

Potential contaminant areas of concern at the site include areas in which lumber, automobiles and construction materials and equipment were stored and maintained, two hot spots identified in site investigations, and ASTs used to store diesel. COPCs associated with these areas of concern include petroleum hydrocarbons, VOCs, PAHs and other semivolatile organic compound (SVOCs), and metals. NYSDEC identified anthracene, benzo(a)pyrene, and lead as COPCs for the site (NYSDEC 2012).

7.1 Uplands

Formerly, the site stored diesel fuel in two aboveground storage tanks (ASTs; 275 gallons and 250 gallons), and nine 5-gallon fuel containers, which were present on site during the 1997 Phase I Environmental Site Assessment (ESA; ECI 1997).

7.2 Overwater Activities

This site is not adjacent to Newtown Creek or associated waterways. Information regarding overwater activites was not identified in documents available for review.

7.3 Spills

Information regarding on-site spills was not identified in documents available for review.

8 PHYSICAL SITE SETTING

8.1 Geology

The surficial materials beneath the site are till, which is composed of clay, silt, sand, and boulders. It is unsorted, mostly impermeable, and deposited beneath glacial ice (ECI 1997). Soil borings logs describe the soil encountered from the surface to 6 feet bgs as dark to medium brown, dry to moist, medium to coarse sand and gravel. Soil between 6 and 12 feet bgs was described as medium brown, moist to saturated, fine and medium sands (ECI 1999b).

8.2 Hydrogeology

Based on data collected from three on-site groundwater monitoring wells, the general groundwater flow at the site is in a northwesterly direction with groundwater occurring below the site at 8 to 10 feet bgs. A groundwater gradient contour map is provided as Attachment 1 (ECI 1999b).

9 NATURE AND EXTENT (CURRENT UNDERSTANDING OF ENVIRONMENTAL CONDITIONS)

9.1 Soil

Soil Investigations ☒ Yes ☐ No

Bank Samples ☐ Yes ☐ No ☒ Not Applicable

Soil-Vapor Investigation ☐ Yes ☒ No

9.1.1 Soil Investigations

Soil investigations at the site included a test pit excavation by ECI in March of 1997 and five soil borings (10 samples, to 6 feet below grade) by American Environmental Assessment Corp. (AEAC) in May of 1997, both located in the southern half of the property as shown on Attachment 2 (ECI 1999b). Eleven additional soil samples were collected from the site in 1999 (ECI 1999b). Selected results are summarized in the following table, and complete results are included in Attachments 3 and 4.

Analyte	Units	Minimum Soil Concentration	Maximum Soil Concentration
Metals			
Arsenic	mg/kg	ND	52
Barium	mg/kg	23.3	406
Chromium	mg/kg	9.53	49
Cadmium	mg/kg	ND	*12.5*
Lead	mg/kg	1.24	*1,930*
Mercury	mg/kg	ND	3.5
Selenium	mg/kg	ND	5.6
Silver	mg/kg	ND	ND

Analyte	Units	Minimum Soil Concentration	Maximum Soil Concentration
Copper	mg/kg	8.24	*240*
Nickel	mg/kg	6.15	*33.1*
Zinc	mg/kg	24.1	*1,490*
Iron	mg/kg	10,700	29,300
Cyanide	mg/kg	ND	ND
SVOCs			
Naphthalene	mg/kg	ND	11
1,2,4-trimethylbenzene	mg/kg	ND	0.051
Isopropylbenzene	mg/kg	ND	0.020
1,3,5-trimethylbenzene	mg/kg	ND	0.029
Benzo(a)anthracene	mg/kg	ND	43
Benzo(a)fluoranthene	mg/kg	ND	1,500
benzo(a)fluoranthene	mg/kg	ND	41
benzo(k)fluoranthene	mg/kg	ND	26
benzo(a)pyrene	mg/kg	ND	41
Chrysene	mg/kg	ND	38
Dibenzofuran	mg/kg	ND	12

Notes:
mg/kg – milligrams per kilogram
ND – not detected, detection limits not available

9.2 Groundwater

Groundwater Investigations ☒ Yes ☐ No
Nonaqueous phase liquid (NAPL) Presence (Historical and Current) ☐ Yes ☒ No
Dissolved COPC Plumes ☐ Yes ☒ No
Visual Seep Sample Data ☐ Yes ☐ No ☒ Not Applicable

Groundwater samples were collected on March 16, 1999, from each of the three monitoring wells at the site. Methyl tertiary butyl ether (MTBE) was detected in all three wells at concentrations ranging from 1 to 10 parts per billion (ppb). Barium (ranging from 61 to 167 ppb), copper (6 to 8 ppb), and iron (315 to 989 ppb) were detected in samples collected from all three wells. Zinc was detected in monitoring well (MW)-3 at 5 ppb (ECI 1999b). Analytical results are provided in Attachments 3 and 4.

9.3 Surface Water

Surface Water Investigation	☐ Yes ☒ No
SPDES Permit (Current or Past)	☐ Yes ☒ No
Industrial Wastewater Discharge Permit (Current or Past)	☐ Yes ☒ No
Stormwater Data	☐ Yes ☒ No
Catch Basin Solids Data	☐ Yes ☒ No
Wastewater Data	☐ Yes ☒ No

Information regarding on-site stormwater management and infrastructure was not identified in documents available for review. This site is within the Newtown Creek WPCP sewershed. Stormwater and wastewater discharges from the site flow into a combined municipal sewer system. When the combined flows exceed the system's capacity, untreated CSOs are discharged to the East River (NYCDEP 2007).

9.4 Sediment

Creek Sediment Data ☐ Yes ☐ No ☒ Not Applicable

Information related to sediment investigations was not identified in documents available for review.

9.5 Air

Air Permit	☐ Yes ☒ No
Air Data	☐ Yes ☒ No

Information related to air emissions from the site was not identified in documents available for review.

10 REMEDIATION HISTORY (INTERIM REMEDIAL MEASURES AND OTHER CLEANUPS)

Remedial actions at the site were performed following completion of the three soil investigations summarized in Section 9. In November of 2001, 89.78 tons of metal-

contaminated soil were excavated and disposed of off site. An area approximately 80 feet by 40 feet was excavated to a depth of 2 feet bgs. Additional excavation to depths of 4 to 6 feet bgs was performed in some areas. Excavated material was removed from the site by a licensed waste hauler and transported to a licensed disposal facility. The excavation was backfilled to grade with clean fill (HTE 2002). The extent of excavation and confirmation sample locations are shown on Attachment 5.

Eight endpoint samples were taken after the soil removal in 2001 and analyzed for VOCs, SVOCs, and metals (HTE 2002). The report concluded that no significant levels of VOCs or SVOCs were detected in endpoint samples and metals were detected at concentrations below regulatory levels requiring further investigatory or remedial actions (HTE 2002). On March 22, 2002, after the Remedial Action Report (February 8, 2002) was completed, the NYSDEC sent a memorandum recommending that no further investigatory or remedial work was required at the site (Harrington 2002).

11 BIBLIOGRAPHY/INFORMATION SOURCES

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Harrington, D. (NYSDEC, Division of Environmental Remediation, Bureau of Hazardous Site Control), 2002. Memorandum Regarding: No Further Action opinion. March 22, 2002.

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York. February 8, 2002.NYCDCP, 2009. Zoning Districts, New York City vector digital data. NYCDCP, Technical Review Division.

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NYCDEP (New York City Department of Environmental Protection), 2007. *Landside Modeling Report*. City-Wide Long Term CSO Control Planning Project, Volume 6, Newtown Creek WPCP. Final. New York City Department of Environmental Protection, Bureau of Engineering Design and Construction. October 2007.

NYCLPC (New York City Landmarks Preservation Commission), 2007. *Eberhard Faber Pencil Company Historic District Designation Report*. October 30, 2007.

NYSDEC (New York State Department of Environmental Conservation), 2012. Environmental Site Remediation Database. Accessed January 10, 2012. Available from: http://www.dec.ny.gov/cfmx/extapps/derexternal/haz/details.cfm and http://www.dec.ny.gov/cfmx/extapps/derexternal/haz/details.cfm?pageid=3

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Sanborn, 1905. *Insurance Maps of the Borough of Brooklyn, City of New York*. Volume 4, Sheet 6.

Sanborn, 1916. *Insurance Maps of the Borough of Brooklyn, City of New York.* Volume 4, Sheet 6.

Sanborn, 1942. *Insurance Maps of the Borough of Brooklyn, City of New York.* Volume 4, Sheet 6. Original 1916, revised 1942.

Sanborn, 1951. *Insurance Maps of the Borough of Brooklyn, City of New York.* Volume 4, Sheet 6. 1951.

12 ATTACHMENTS

Figures

Tables

Supplemental Attachments

Table 1

Potential Areas of Concern and Transport Pathways Assessment – 101-105 West Street

Potential Areas of Concern	Media Impacted					COPCs														Potential Complete Pathway						
						TPH			VOCs																		
Description of Areas of Concern	Surface Soil	Subsurface Soil	Groundwater	Catch Basin Solids	Creek Sediment	Gasoline-Range	Diesel – Range	Heavier – Range	Petroleum Related (e.g., BTEX)	VOCs	Chlorinated VOCs	SVOCs	PAHs	Phthalates	Phenolics	Metals	PCBs	Herbicides and Pesticides	Dioxins/Furans	Overland Transport	Groundwater	Direct Discharge – Overwater	Direct Discharge – Storm/Wastewater	Discharge to Sewer/CSO	Bank Erosion	Air Release
Two hot spots (southern portion of the site)	√	√	√	?	?	√	√	√	√	√	?	√	√	?	?	√	?	?	?	--	--	--	--	--	--	?
ASTs (diesel fuel storage)	√	√	√	?	?	√	√	√	√	√	?	√	√	?	?	√	?	?	?	--	--	--	--	--	--	?
Lumber storage area	√	√	√	?	?	?	?	?	?	?	?	?	?	?	?	√	?	?	?	--	--	--	--	--	--	?
Construction materials and equipment storage areas	√	√	√	?	?	?	?	?	?	?	?	?	?	?	?	√	?	?	?	--	--	--	--	--	--	?

Notes:
√ – COPCs are/were present in areas of concern having a current or historical pathway that is determined to be complete or potentially complete.
? – There is not enough information to determine if COPC is/was present in area of concern or if pathway is complete.
-- – Current or historical pathway has been investigated and shown to be not present or incomplete.

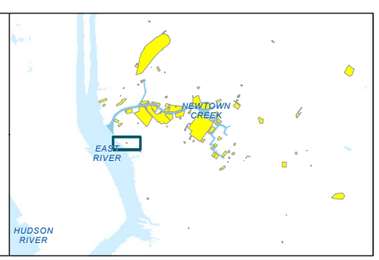
AST – aboveground storage tank
BTEX – benzene, toluene, ethylbenzene, and xylenes
COPC – constituents of potential concern
CSO – combined sewer overflows
PAH – polycyclic aromatic hydrocarbons
PCB – polychlorinated biphenyl
SVOC – semi-volatile organic compounds
TPH – total petroleum hydrocarbons
VOC – volatile organic compounds

USEPA Sample Locations (Surface and Subsurface)
Shoreline (NYC Dept. of Information Technology, 2006)
USGS Nat'l Elev. Dataset 5-foot Contours
Selected Site Property Boundary
Neighboring Site Property Boundary

Outfall Class
- Direct Discharge
- General
- Highway Drain
- Major Stormwater Outfall
- SPDES
- Storm Drain

NOTES:
1. Outfall Labeling: BB: Bowery Bay; NC(B/Q): Newtown Creek, Brooklyn/Queens; ST: Stormwater.
2. Outfall locations are preliminary, compiled, estimated data based on New York City Department of Environmental Protection (NYCDEP) maps and tabulated data and other resources. Many outfall locations were taken from the New York City Shoreline Survey Program: Newtown Creek Water Pollution Control Plant Drainage Area, NYCDEP, March 31, 2003. Other locations were taken from an excerpt from a similar report from 2008 (the complete report was not included in files available for review). Finally, some outfall locations were inherited from previous Anchor QEA and Newtown Creek Project work. Latitudinal and longitudinal data provided in the 2003 and 2008 NYCDEP reports were rounded to the nearest second. This resulted in potential outfall location discrepancies of up to approximately 200 feet. All outfall locations are currently under field verification.
3. Aerial Photos: New York State Division of Homeland Security and Emergency Services, 2010.
4. Site Boundaries are based on New York City parcels data.
5. Coarse topographic contours are derived from U.S. Geological Survey 10-meter data.

Feet
0 100 200 300 400



Q:\Jobs\110782-01_NewTownCreek\Maps\RI_RemedialInvestigation\Historic_Data_Research\Site Features.Mapbook.mxd ckiblinger 5/23/2012 6:00:42 PM

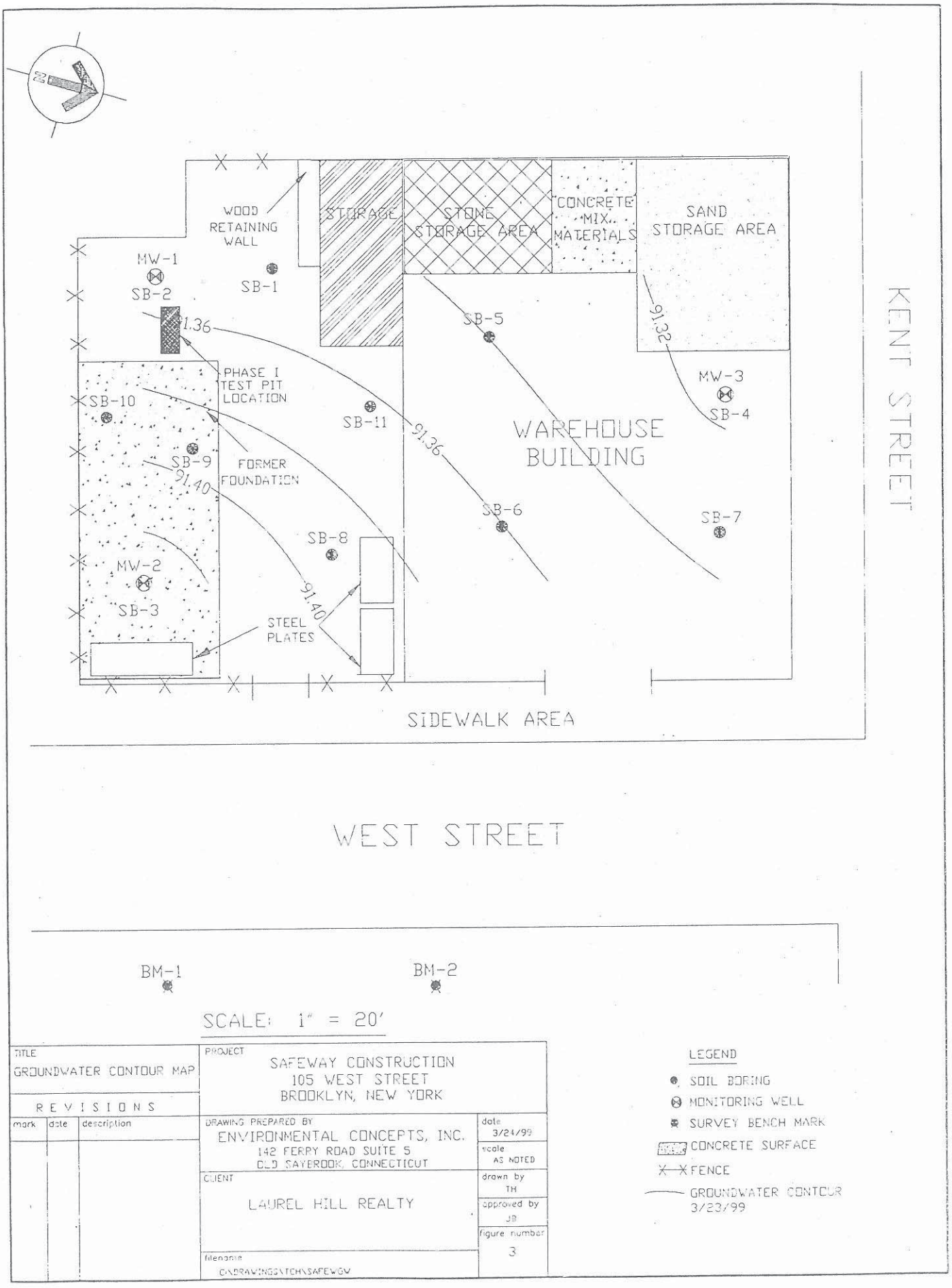
ANCHOR QEA

DRAFT

Figure 1
Site Vicinity Map
Draft Upland Site Summary: 101-105 West Street
Newtown Creek RI/FS

SUPPLEMENTAL ATTACHMENTS

Attachment 1



Attachment 2

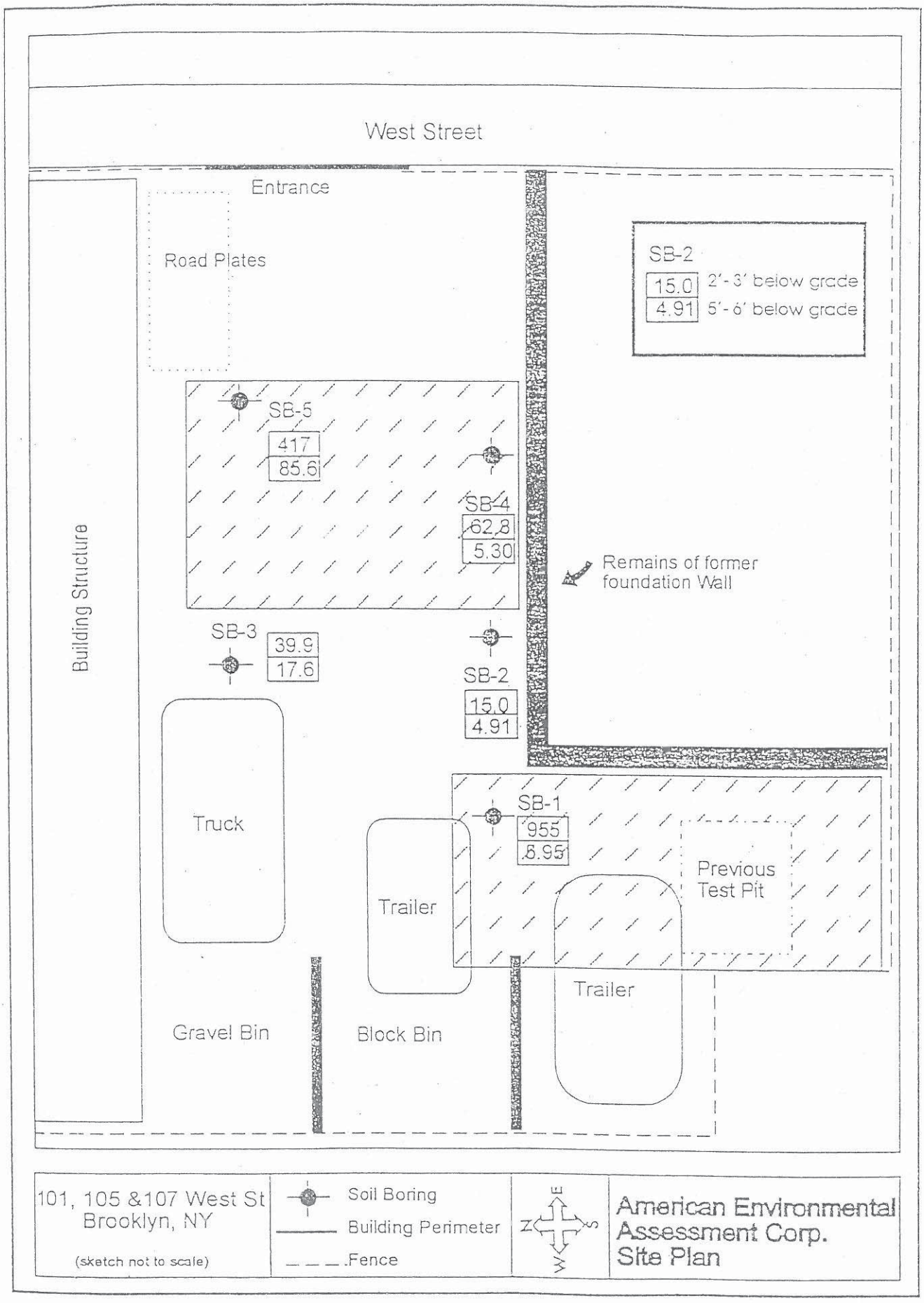


Table 1

SOIL SAMPLING ANALYTICAL RESULTS
FOR
105 WEST STREET
BROOKLYN, NEW YORK

March 2, 1999

Parameter	Soil Sample ID: SB-2(S-2)	SB-2(S-6)	SB-3(S-2)	SB-3(S-6)	SB-4(S-2)	SB-4(S-5)	SB-5(S-2)	SB-6(S-2)	SB-11(S-2)	NYSDEC TAGM 4046* SCO to Protect GW (mg/Kg)	NYSDEC TAGM 4046* Recommended SCO (mg/Kg)
VOC's by 8021 (ug/Kg)											
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.08	0.06
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.5	5.5
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5	1.5
o-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL	NL
p-&m-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL	NL
Total Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	1.2
Isopropylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL	NL
n-Propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL	NL
p-Isopropyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL	NL
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL	NL
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL	NL
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL	NL
sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL	NL
tert-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL	NL
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL	NL
Methyl-tert-butyl ether (MTBE)	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL	NL
PAH's by 8270 (ug/Kg)										NYSDEC TAGM 4046* SCO to Protect GW (ug/Kg)	NYSDEC TAGM 4046* Recommended SCO (ug/Kg)
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	13,000	13,000
Anthracene	ND	ND	518	ND	ND	ND	ND	ND	737	700,000	50,000
Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	280,000	50,000
Phenanthrene	ND	ND	2100	ND	ND	ND	ND	ND	ND	220,000	50,000
Pyrene	ND	ND	2300	ND	ND	ND	ND	ND	3100	680,000	50,000
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	443	90,000	50,000
Benzo[a]anthracene	ND	ND	ND	ND	ND	ND	ND	ND	1300	3,000	224 or MDL
Fluoranthene	ND	ND	2200	ND	ND	ND	ND	ND	2800	1,900,000	50,000
Benzo[b]fluoranthene	ND	ND	970	ND	ND	ND	ND	ND	1500	1100	1100
Benzo[k]fluoranthene	ND	ND	995	ND	ND	ND	ND	ND	1300	1100	1100
Chrysene	ND	ND	1000	ND	ND	ND	ND	ND	ND	400	400
Benzo[a]pyrene	ND	ND	970	ND	ND	ND	ND	ND	1400	11,000	61 or MDL
Benzo[g,h,i]perylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	800,000	50,000
Indeno[1,2,3-cd]pyrene	ND	ND	ND	ND	ND	ND	ND	ND	436	3200	3200
Dibenz[a,h]anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	165,000,000	14 or MDL

ND - Not Detected above laboratory detection limit
NL - Not Listed for specified compound

SCO - Soil Cleanup Objectives (NYSDEC TAGM 4046)
SB - Site Background concentrations

MDL - Method Detection Limit

*NYSDEC TAGM 4046 - New York State Department of Environmental Conservation Division of Hazardous Waste Remediation
Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels, Rev., January 24, 1994

Values in **Bold** signify exceedence of respective NYSDEC TAGM 4046 Recommended SCO.

Table 1 (Continued)

SOIL SAMPLING ANALYTICAL RESULTS
FOR
105 WEST STREET
BROOKLYN, NEW YORK

March 2, 1999

Parameter	Soil Sample ID: SB-2(S-2)	SB-2(S-6)	SB-3(S-2)	SB-3(S-6)	SB-4(S-2)	SB-4(S-5)	SB-5(S-2)	SB-6(S-2)	SB-11(S-2)	NYSDEC TAGM 4046* Eastern USA Background (mg/Kg)	NYSDEC TAGM 4046* Recommended SCO (mg/Kg)
Total RCRA Metals by EPA 6010/7000 Series (mg/Kg)											
Arsenic, total	ND	ND	9.3	ND	1.35	1.45	1.55	1.48	2.6	12	7.5 or SB
Selenium, total	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.9	2 or SB
Chromium, total	9.53	11.6	38	20.6	10.9	9.61	10.5	12.2	18.3	40	10 or SB
Cadmium, total	ND	ND	**2.15**	ND	ND	ND	ND	ND	**2.12**	1	1 or SB
Lead, total	4.63	5.97	**882**	5.2	4.24	4.74	21.1	8.85	127	500**	SB
Barium, total	25.8	23.3	406	38.6	37.2	43.8	43.4	38.7	136	600	300 or SB
Silver, total	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	SB
Mercury	ND	ND	**3.45**	ND	ND	ND	**1.96**	**2.73**	**0.33**	0.2	0.1
Copper	12.9	8.24	**240**	12.4	9.26	9.87	12	12.2	**72.9**	50	2.5 or SB
Nickel	12.3	13.8	**33.1**	**28.7**	15.8	17.5	16.1	16.4	**25.9**	25	13 or SB
Zinc	46.1	24.1	**682**	30.4	31.3	33.8	37.3	33.4	**367**	50	20 or SB
Iron	10,700	13,900	29,300	14,000	12,400	13,300	11,800	14,000	18,500	550,000	2,000 or SB

Parameter	Soil Sample ID: SB-2(S-2)	SB-2(S-6)	SB-3(S-2)	SB-3(S-6)	SB-4(S-2)	SB-4(S-5)	SB-5(S-2)	SB-6(S-2)	SB-11(S-2)	NYSDEC TAGM 4046* SCO to Protect GW Quality (mg/Kg)	NYSDEC TAGM 4046* Recommended SCO (mg/Kg)
PCB's by 8080 (mg/Kg)											
PCB 1016	ND	ND	NS	NS	NS	NS	NS	NS	NS	10	10
PCB 1221	ND	ND	NS	NS	NS	NS	NS	NS	NS	10	10
PCB 1232	ND	ND	NS	NS	NS	NS	NS	NS	NS	10	10
PCB 1242	ND	ND	NS	NS	NS	NS	NS	NS	NS	10	10
PCB 1248	ND	ND	NS	NS	NS	NS	NS	NS	NS	10	10
PCB 1254	ND	ND	NS	NS	NS	NS	NS	NS	NS	10	10
PCB 1260	ND	ND	NS	NS	NS	NS	NS	NS	NS	10	10
PCB Total	ND	ND	NS	NS	NS	NS	NS	NS	NS	10	10

ND - Not Detected above laboratory detection limit
N/A - Not Available for specified compound
NS - Not Sampled for specified compound

SCO - Soil Cleanup Objectives (NYSDEC TAGM 4046)
SB - Site Background concentrations

*NYSDEC TAGM 4046 - New York State Department of Environmental Conservation Division of Hazardous Waste Remediation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels, Rev., January 24, 1994

**Average background concentration for lead in metropolitan and suburban areas generally range from 200 to 500 ppm (Table 4, Appendix A, NYSDEC TAGM 4046).

Values in **Bold** signify exceedence of respective NYSDEC TAGM 4046 Eastern USA Background concentration.

Table 2

SOIL SAMPLING ANALYTICAL RESULTS

FOR

105 WEST STREET
BROOKLYN, NEW YORK

March 3, 1999

	Soil Sample ID												NYSDEC TAGM 4046*	
	SB-1(S-1)	SB-1(S-2)	SB-1(S-3)	SB-3(S-1)	SB-3(S-2)	SB-3(S-3)	SB-5(S-1)	SB-5(S-3)	SB-6(S-1)	SB-6(S-3)	SB-7(S-1)	SB-7(S-2)	Eastern USA Background (mg/Kg)	Recommended SCO (mg/Kg)
Parameter														
Metals by EPA 6010/7000 Series(mg/Kg)														
Lead	347	101	16.5	11.9	NS	6.6	NS	NS	NS	NS	**626**	138	500**	SB
Copper	**169**	**50.2**	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	50	2.5 or SB
Mercury	**0.46**	NS	ND	ND	NS	ND	ND	**1.11**	ND	ND	NS	NS	0.2	0.1
Nickel	24.7	15.9	6.15	15	NS	16.1	NS	NS	NS	NS	NS	NS	25	13 or SB
Zinc	**437**	**119**	**66.6**	30.8	NS	33.8	NS	NS	NS	NS	NS	NS	50	20 or SB
Cyanide***	NS	NS	NS	NS	ND	NS	NS	NS	NS	NS	NS	NS	N/A	NL

	Soil Sample ID												NYSDEC TAGM 4046*	
	SB-7(S-3)	SB-8(S-1)	SB-8(S-2)	SB-8(S-3)	SB-9(S-1)	SB-9(S-2)	SB-9(S-3)	SB-10(S-1)	SB-10(S-2)	SB-10(S-3)	SB-11(S-1)	SB-11(S-3)	Eastern USA Background (mg/Kg)	Recommended SCO (mg/Kg)
Parameter														
Metals by EPA 6010/7000 Series(mg/Kg)														
Lead	3.92	335	85.1	5.35	109	4.1	1.42	31.6	4.94	3.56	NS	NS	500**	SB
Copper	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**62.7**	13.7	50	2.5 or SB
Mercury	NS	NS	NS	NS	**0.49**	ND	ND	**1.68**	ND	ND	**0.47**	ND	0.2	0.1
Nickel	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	20.3	17.2	25	13 or SB
Zinc	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**229**	42.8	50	20 or SB
Cyanide***	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	N/A	NL

ND - Not Detected above laboratory detection limit
NL - Not Listed for specified compound
NS - Not Sampled for specified compound

SCO - Soil Cleanup Objectives (NYSDEC TAGM 4046)
SB - Site Background concentrations
N/A - Not Available for specified compound

*NYSDEC TAGM 4046 - New York State Department of Environmental Conservation Division of Hazardous Waste Remediation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels, Rev., January 24, 1994

**Average background concentration for lead in metropolitan and suburban areas generally range from 200 to 500 ppm (Table 4, Appendix A, NYSDEC TAGM 4046).

***Cyanide analysis by Standard Method 412B

Values in **Bold** signify exceedence of respective NYSDEC TAGM 4046 Eastern USA Background concentration.

Attachment 3

Table 3

TCLP SOIL SAMPLING ANALYTICAL RESULTS
FOR
105 WEST STREET
BROOKLYN, NEW YORK

April 12, 1999

Parameter	Soil Sample ID SB-3B(S-2)	SB-6B(S-2)	SB-7B(S-1)	SB-11B(S-2)	NYSDEC TAGM 4046* Allowable Soil Concentrations (ppm)	Protect Water Quality (ppm)
TCLP Metals by EPA 1311/6010 (mg/L)						
TCLP Lead	0.215	NS	0.136	NS	NA	N/A
TCLP Mercury	ND	ND	NS	NS	NA	N/A
TCLP Cadmium	ND	NS	NS	ND	NA	N/A
TCLP Cyanide	NS	NS	NS	ND	NA	N/A

					NYSDEC TAGM 4046* Allowable Soil Concentrations (ppb)
TCLP Pesticides by 8080 (ug/L)					
Aldrin	NS	NS	NS	ND	5
alpha-BHC	NS	NS	NS	ND	2
beta-BHC	NS	NS	NS	ND	2
delta-BHC	NS	NS	NS	ND	3
gamma-BHC (Lindane)	NS	NS	NS	ND	0.6
Chlordane	NS	NS	NS	ND	20
4,4'-DDD	NS	NS	NS	ND	77
4,4'-DDE	NS	NS	NS	ND	44
4,4'-DDT	NS	NS	NS	ND	25
Dieldrin	NS	NS	NS	ND	1
Endosulfan I	NS	NS	NS	ND	9
Endosulfan II	NS	NS	NS	ND	9
Endosulfan sulfate	NS	NS	NS	ND	10
Endrin	NS	NS	NS	ND	1
Endrin aldehyde	NS	NS	NS	ND	NL
Heptachlor	NS	NS	NS	ND	1
Heptachlor epoxide	NS	NS	NS	ND	0.2
Methoxychlor	NS	NS	NS	ND	9,000
Toxaphene	NS	NS	NS	ND	NL

ND - Not Detected above laboratory detection limit
NL - Not Listed for specified compound
NS - Not Sampled for specified compound

SB - Site Background concentrations
N/A - Not Available for specified compound
NA - Not Applicable for specified compound

Concentrations of milligrams per liter (mg/L) = parts per million (ppm).
Concentrations of micrograms per liter (ug/L) = parts per billion (ppb).

*NYSDEC TAGM 4046 - New York State Department of Environmental Conservation Division of Hazardous Waste Remediation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels, Rev., January 24, 1994

Attachment 3

Table 4

GROUNDWATER SAMPLING ANALYTICAL RESULTS
FOR
105 WEST STREET
BROOKLYN, NEW YORK

March 16, 1999

	GW Sample ID			*NYSDEC TOGS 1.1.1**
	MW-1	MW-2	MW-3	Class GA Groundwater Standard/Guidance Values (ug/L)
Parameter				
VOC's by 8021 (ug/L)				
Benzene	ND	ND	ND	1
Ethylbenzene	ND	ND	ND	5
Toluene	ND	ND	ND	5
o-Xylene	ND	ND	ND	5
p- & m-Xylenes	ND	ND	ND	5
Total Xylenes	ND	ND	ND	5**
Isopropylbenzene	ND	ND	ND	5
n-Propylbenzene	ND	ND	ND	5
p-Isopropyltoluene	ND	ND	ND	5
1,2,4-Trimethylbenzene	ND	ND	ND	5
1,3,5-Trimethylbenzene	ND	ND	ND	5
n-Butylbenzene	ND	ND	ND	5
sec-Butylbenzene	ND	ND	ND	5
tert-Butylbenzene	ND	ND	ND	5
Naphthalene	ND	ND	ND	10
Methyl-tert-butyl ether	10	1	2	NL
PAH's by 8270 (ug/L)				
Naphthalene	ND	ND	ND	10
Anthracene	ND	ND	ND	50
Fluorene	ND	ND	ND	50
Pyrene	ND	ND	ND	50
Acenaphthene	ND	ND	ND	20
Benzo[a]anthracene	ND	ND	ND	0.002
Fluoranthene	ND	ND	ND	50
Benzo[b]fluoranthene	ND	ND	ND	0.002
Benzo[k]fluoranthene	ND	ND	ND	0.002
Chyrsene	ND	ND	ND	0.002
Benzo[a]pyrene	ND	ND	ND	ND
Benzo[g,h,i]perylene	ND	ND	ND	NL
Indeno[1,2,3-cd]pyrene	ND	ND	ND	0.002
Dibenz[a,h]anthracene	ND	ND	ND	NL
Metals by 6010/200 Series (ug/L)				
Silver	ND	ND	ND	50
Arsenic	ND	ND	ND	25
Barium	61	92	167	1,000
Cadmium	ND	ND	ND	5
Chromium	ND	ND	ND	50
Mercury	ND	ND	ND	0.7
Lead	ND	ND	ND	25
Selenium	ND	ND	ND	10
Copper	7	6	8	200
Nickel	ND	ND	ND	100
Zinc	ND	ND	5	2,000
Iron	351	366	989	300

ND - Not Detected above the laboratory detection limit

NL - Not Listed for specified compound

*NYSDEC TOGS 1.1.1 - New York State Department of Environmental Conservation
Division of Water Technical and Operational Guidance Series (1.1.1)
Ambient Water Quality Standards and Guidance Values and Groundwater
Effluent Limitations, Rev., June 1998

**Class GA Groundwater Standard listed for individual Xylene concentrations.

TABLE 1

Safeway Construction
105 West Street
Brooklyn, New York

EPA Method 8240 Results for 0 - 2' Layer

Compound	Concentration	AGV	SCO	Compound	Concentration	AVG	SCO
Acetone	ND		200	1,2-Dichloropropane	ND		NA
Acrolein	ND		NA	cis-1,3-Dichloropropylene	ND		NA
Acrylonitrile	ND		NA	trans-1,3-Dichloropropylene	ND		NA
Benzene	ND	14	60	Ethanol	ND		NA
Bromodichoromethane	ND		NA	Ethybenzene	ND	100	5,500
Bromoform	ND		NA	Ethyl methacrylate	ND		NA
Bromomethane	ND		NA	2-Hexanone	ND		NA
2-Butanone	ND		300	Iodomethane	ND		NA
Carbon disulfide	ND		2,700	Methylene chloride	ND		100
Carbon tetrachloride	ND		600	4-Methyl-2-pentanone	ND		1,000
Chlorobenzene	ND		1,700	Styrene	ND		NA
Chloroethane	ND		1,900	1,1,2,2-Tetrachloroethane	ND		600
2-Chloroethylvinyl ether	ND		NA	Tetrachlorethylene	ND		1,400
Chloroform	ND		NA	Toluene	ND	100	1,500
Chloromethane	ND		NA	1,1,1-Trichloroethane	ND		800
Dibromochloromethane	ND		NA	1,1,2-Trichloroethane	ND		NA
Dibromomethane	ND		NA	Trichloroethylene	ND		700
1,4-Dichloro-2-butene	ND		NA	Trichlorofluoromethane	ND		NA
Dichlorodifluoromethane	ND		NA	1,2,3-Trichloropropane	ND		400
1,1-Dichloroethane	ND		200	Vinyl acetate	ND		NA
1,2-Dichloroethane	ND		100	Vinyl chloride	ND		200
1,1-Dichloroethylene	ND		400	Xylenes	ND	100	1,200
1,2-Dichloroethylene	ND		300				

All concentrations are in micrograms per kilogram (ug/kg).
ND - Not detected
AGV - Alternative Guidance Value
SCO - Soil Cleanup Criteria

TABLE 1 (cont)
Safeway Construction
105 West Street
Brooklyn, New York

EPA Method 8260 Results for 0 - 2' Layer

Compound	Concentration	AGV	SCO	Compound	Concentration	AGV	SCO
Benzene	ND	14	60	2,2-Dichloropropane	ND		NA
Bromobenzene	ND		NA	1,1-Dichloropropylene	ND		NA
Bromochloromethane	ND		NA	cis-1,3-Dichloropropyplene	ND		NA
Bromodichloromethane	ND		NA	trans-1,3-Dichloropropylene	ND		NA
Bromoform	ND		NA	Ethylbenzene	ND	100	5,500
Bromomethane	ND		NA	Hexachlorobutadiene	ND		NA
n-Butylbenzene	ND	100	NA	Isopropylbenzene	ND	100	NA
sec-Butylbenzene	ND	100	NA	p-Isopropyltoluene	ND	100	NA
tert-Butylbenzene	ND		NA	Methylene chloride	ND		100
Carbon tetrachloride	ND		600	Naphthalene	11,000	200	13000
Chlorobenzene	ND		1,700	n-Propylbenzene	ND	100	NA
Chloroethane	ND		1,900	Styrene	ND		NA
Chloroform	ND		300	1,1,1,2-Tetrachloroethane	ND		NA
1-Chlorohexane	ND		NA	1,1,2,2-Tetrachloroethane	ND		600
Chloromethane	ND		NA	Tetrachloroethane	ND		1,400
2-Chlorotoluene	ND		NA	Toluene	ND	100	1,500
4-Chlorotoluene	ND		NA	1,2,3-Trichlorobenzene	ND		NA
Dibromochloromethane	ND		NA	1,2,4-Trichlorobenzene	ND		NA
1,2-Dibromo-3-chloropropane	ND		NA	1,1,1-Trichloroethane	ND		800
1,2-Dibromoethane	ND		NA	1,1,2-Trichloroethane	ND		NA
Dibromomethane	ND		NA	Trichloroethylene	ND		700
1,2-Dichlorobenzene	ND		7,900	Trichlorofluoromethane	ND		NA
1,3-Dichlorobenzene	ND		1,600	1,2,3-Trichloropropane	ND		400
1,4-Dichlorobenzene	ND		8,500	1,2,3-Trimethylbenzene	ND		NA
Dichlorodifluoromethane	ND		NA	1,2,4-Trimethylbenzene	51	100	NA
1,1-Dichloroethane	ND		200	1,3,5-Trimethylbenzene	ND	100	NA
1,2-Dichloroethane	ND		100	Vinly chloride	ND		200
1,1-Dichloroethylene	ND		400	o-Xylene	ND	100	1,200
1,2-Dichloroethylene	ND		300	p- & m-Xylenes	ND	100	1,200
1,2-Dichloropropane	ND		NA	MTBE	ND	1,000	NA
1,3-Dichloropropane	ND		300				

All concentrations are in micrograms per kilogram (ug/kg).
ND - Not detected
AGV - Alternative Guidance Value
SCO - Soil Cleanup Criteria

Attachment 4

TABLE 2

Safeway Construction
105 West Street
Brooklyn, New York

Priority Pollutant Metals Results for 0 - 2' Layer

Metal	Concentration	SCO
Arsenic	52.0	7.5 or SB
Selenium	5.56	0.2 or SB
Thallium	ND	SB
Antimony	9.34	SB
Lead	1,930	SB
Beryllium	ND	0.16 or SB
Chromium	49.3	10 or SB
Cadmium	12.5	1.0 or SB
Copper	649	25 or SB
Nickel	30.9	13 or SB
Zinc	1,490	20 or SB
Silver	ND	SB
Mercury	1.27	0.1
Iron	54,900	2000 or SB

Metals concentrations are in milligrams per kilogram (mg/kg).
SVOC concentrations are in micrograms per kilogram (ug/kg).
ND - Not detected
SCO - Soil Cleanup Objective
SB - Site Background concentration
Lead SB in metropolitan areas ranges from 200 to 500 mg/kg.

Attachment 4

Table 3

Safeway Construction
105 West Street
Brooklyn, New York

EPA Method 8270 Results for 0 - 2' Layer

Compound	Concentration	AGV	SCO	Compound	Concentration	AGV	SCO
Acenaphthene	ND		90000	4,6-Dinitro-2-methylphenol	ND		NA
Acenaphthylene	ND	1000	41000	2,4-Dinitrophenol	ND		200
Anthracene	ND		700000	2,4-Dinitrotoluene	ND		1000
Benzo(a)anthracene	ND	0.04	3000	2,6-Dinitrotoluene	ND		NA
Benzo(b)fluoranthene	ND	0.04	1100	Di-n-octylphthalate	ND		120000
Benzo(k)fluoranthene	ND		1100	Fluoranthene	ND	1000	1900000
Benzo(g,h,i)perylene	ND	0.04	800000	Fluorene	ND	1000	350000
Benzo(a)pyrene	ND	0.04	11000	Hexachlorobenzene	ND		1400
Benzyl alcohol	ND		NA	Hexachlorobutadiene	ND		NA
Bis(2-chloroethoxy)methane	ND		NA	Hexachlorocyclopentadiene	ND		NA
Bis(2-chloroethyl)ether	ND		NA	Hexachloroethane	ND		NA
Bis(2-chloroisopropyl)ether	ND		NA	Indeno(1,2,3-cd)pyrene	ND	0.04	32000
Bis(2-ethylhexyl)phthalate	ND		435000	Isophorone	ND		4400
4-Bromophenyl phenyl ether	ND		NA	2-Methylnaphthalene	ND		36400
Butyl benzyl phthalate	ND		122000	2-Methylphenol	ND		100
4-Chloroaniline	ND		NA	4-Methylphenol	ND		900
2-Chloronaphthalene	ND		NA	Naphthalene	ND	200	13000
4-Chloro-3-methyl phenol	ND		NA	2-Nitroaniline	ND		430
2-Chlorophenol	ND		NA	3-Nitroaniline	ND		NA
4-Chlorophenly phenyl ether	ND		NA	4-Nitroaniline	ND		NA
Chrysene	ND	0.04	400	Nitrobenzene	ND		200
Dibenz(a,h)anthracene	ND	1000	1.65E+08	2-Nitrophenol	ND		330
Dibenzofuran	ND		6200	4-Nitrophenol	ND		100
Di-n-butylphthalate	ND		8100	N-Nitrosodiphenylamine	ND		NA
1,3-Dichlorobenzene	ND		1600	N-Nitrosodi-n-propylamine	ND		NA
1,4-Dichlorobenzene	ND		8500	Pentachlorophenol	ND		1000
1,2-Dichlorobenzene	ND		7900	Phenanthrene	ND	1000	220000
3,3-Dichlorobenzidine	ND		NA	Phenol	ND		30
2,4-Dichlorophenol	ND		NA	Pyrene	ND	1000	665000
Diethylphthalate	ND		7100	1,2,4-Trichlorobenzene	ND		NA
2,4-Dimethylphenol	ND		NA	2,4,5-Trichlorophenol	ND		100
Dimethylphthalate	ND		2000	2,4,6-Trichlorophenol	ND		NA

All concentrations are reported in micrograms per kilogram (ug/kg).
ND - Not detected
AGV - Alternative Guidance Values
SCO - Soil Cleanup Objective

TABLE 4

Safeway Construction
105 West Street
Brooklyn, New York

EPA Method 8240 Results for 2' - 5.5' Layer

Compound	Concentration	AGV	SCO	Compound.	Concentration	AVG	SCO
Acetone	ND		200	1,2-Dichloropropane	ND		NA
Acrolein	ND		NA	cis-1,3-Dichloropropylene	ND		NA
Acrylonitrile	ND		NA	trans-1,3-Dichloropropylene	ND		NA
Benzene	ND	14	60	Ethanol	ND		NA
Bromodichoromethane	ND		NA	Ethybenzene	ND	100	5,500
Bromoform	ND		NA	Ethyl methacrylate	ND		NA
Bromomethane	ND		NA	2-Hexanone	ND		NA
2-Butanone	ND		300	Iodomethane	ND		NA
Carbon disulfide	ND		2,700	Methylene chloride	ND		100
Carbon tetrachloride	ND		600	4-Methyl-2-pentanone	ND		1,000
Chlorobenzene	ND		1,700	Styrene	ND		NA
Chloroethane	ND		1,900	1,1,2,2-Tetrachloroethane	ND		600
2-Chloroethylvinyl ether	ND		NA	Tetrachlorethylene	ND		1,400
Chloroform	ND		NA	Toluene	ND	100	1,500
Chloromethane	ND		NA	1,1,1-Trichloroethane	ND		800
Dibromochloromethane	ND		NA	1,1,2-Trichloroethane	ND		NA
Dibromomethane	ND		NA	Trichloroethylene	ND		700
1,4-Dichloro-2-butene	ND		NA	Trichlorofluoromethane	ND		NA
Dichlorodifluoromethane	ND		NA	1,2,3-Trichloropropane	ND		400
1,1-Dichloroethane	ND		200	Vinyl acetate	ND		NA
1,2-Dichloroethane	ND		100	Vinyl chloride	ND		200
1,1-Dichloroethylene	ND		400	Xylenes	ND	100	1,200
1,2-Dichloroethylene	ND		300				

All concentrations are in micrograms per kilogram (ug/kg).
ND - Not detected
AGV - Alternative Guidance Value
SCO - Soil Cleanup Criteria

TABLE 4 (cont)

Safeway Construction
105 West Street
Brooklyn, New York

EPA Method 8260 Results for 2' - 5.5' Layer

Compound	Concentration	AGV	SCO	Compound	Concentration	AGV	SCO
Benzene	ND	14	60	2,2-Dichloropropane	ND		NA
Bromobenzene	ND		NA	1,1-Dichloropropylene	ND		NA
Bromochloromethane	ND		NA	cis-1,3-Dichloropropyplene	ND		NA
Bromodichloromethane	ND		NA	trans-1,3-Dichloropropylene	ND		NA
Bromoform	ND		NA	Ethylbenzene	ND	100	5,500
Bromomethane	ND		NA	Hexachlorobutadiene	ND		NA
n-Butylbenzene	ND	100	NA	Isopropylbenzene	20	100	NA
sec-Butylbenzene	ND	100	NA	p-Isopropyltoluene	ND	100	NA
tert-Butylbenzene	ND		NA	Methylene chloride	ND		100
Carbon tetrachloride	ND		600	Naphthalene	390	200	13000
Chlorobenzene	ND		1,700	n-Propylbenzene	ND	100	NA
Chloroethane	ND		1,900	Styrene	ND		NA
Chloroform	ND		300	1,1,1,2-Tetrachloroethane	ND		NA
1-Chlorohexane	ND		NA	1,1,2,2-Tetrachloroethane	ND		600
Chloromethane	ND		NA	Tetrachloroethane	ND		1,400
2-Chlorotoluene	ND		NA	Toluene	ND	100	1,500
4-Chlorotoluene	ND		NA	1,2,3-Trichlorobenzene	ND		NA
Dibromochloromethane	ND		NA	1,2,4-Trichlorobenzene	ND		NA
1,2-Dibromo-3-chloropropane	ND		NA	1,1,1-Trichloroethane	ND		800
1,2-Dibromoethane	ND		NA	1,1,2-Trichloroethane	ND		NA
Dibromomethane	ND		NA	Trichloroethylene	ND		700
1,2-Dichlorobenzene	ND		7,900	Trichlorofluoromethane	ND		NA
1,3-Dichlorobenzene	ND		1,600	1,2,3-Trichloropropane	ND		400
1,4-Dichlorobenzene	ND		8,500	1,2,3-Trimethylbenzene	ND		NA
Dichlorodifluoromethane	ND		NA	1,2,4-Trimethylbenzene	66	100	NA
1,1-Dichloroethane	ND		200	1,3,5-Trimethylbenzene	29	100	NA
1,2-Dichloroethane	ND		100	Vinly chloride	ND		200
1,1-Dichloroethylene	ND		400	o-Xylene	ND	100	1,200
1,2-Dichloroethylene	ND		300	p- & m-Xylenes	ND	100	1,200
1,2-Dichloropropane	ND		NA	MTBE	ND	1,000	NA
1,3-Dichloropropane	ND		300				

All concentrations are in micrograms per kilogram (ug/kg).
ND - Not detected
AGV - Alternative Guidance Value
SCO - Soil Cleanup Criteria

Attachment 4

TABLE 5

Safeway Construction
105 West Street
Brooklyn, New York

Priority Pollutant Metals Results for 2' - 5.5' Layer

Metal	Concentration	SCO
Arsenic	11.4	7.5 or SB
Selenium	1.52	0.2 or SB
Thallium	ND	SB
Antimony	3.27	SB
Lead	310	SB
Beryllium	ND	0.16 or SB
Chromium	29	10 or SB
Cadmium	2.34	1.0 or SB
Copper	92.9	25 or SB
Nickel	19.7	13 or SB
Zinc	345	20 or SB
Silver	ND	SB
Mercury	0.75	0.1
Iron	18,000	2000 or SB

Metals concentrations are in milligrams per kilogram (mg/kg).
SVOC concentrations are in micrograms per kilogram (ug/kg).
ND - Not detected
SCO - Soil Cleanup Objective
SB - Site Background concentration
Lead SB in metropolitan areas ranges from 200 to 500 mg/kg.
AGV - Alternative Guidance Value

Table 6

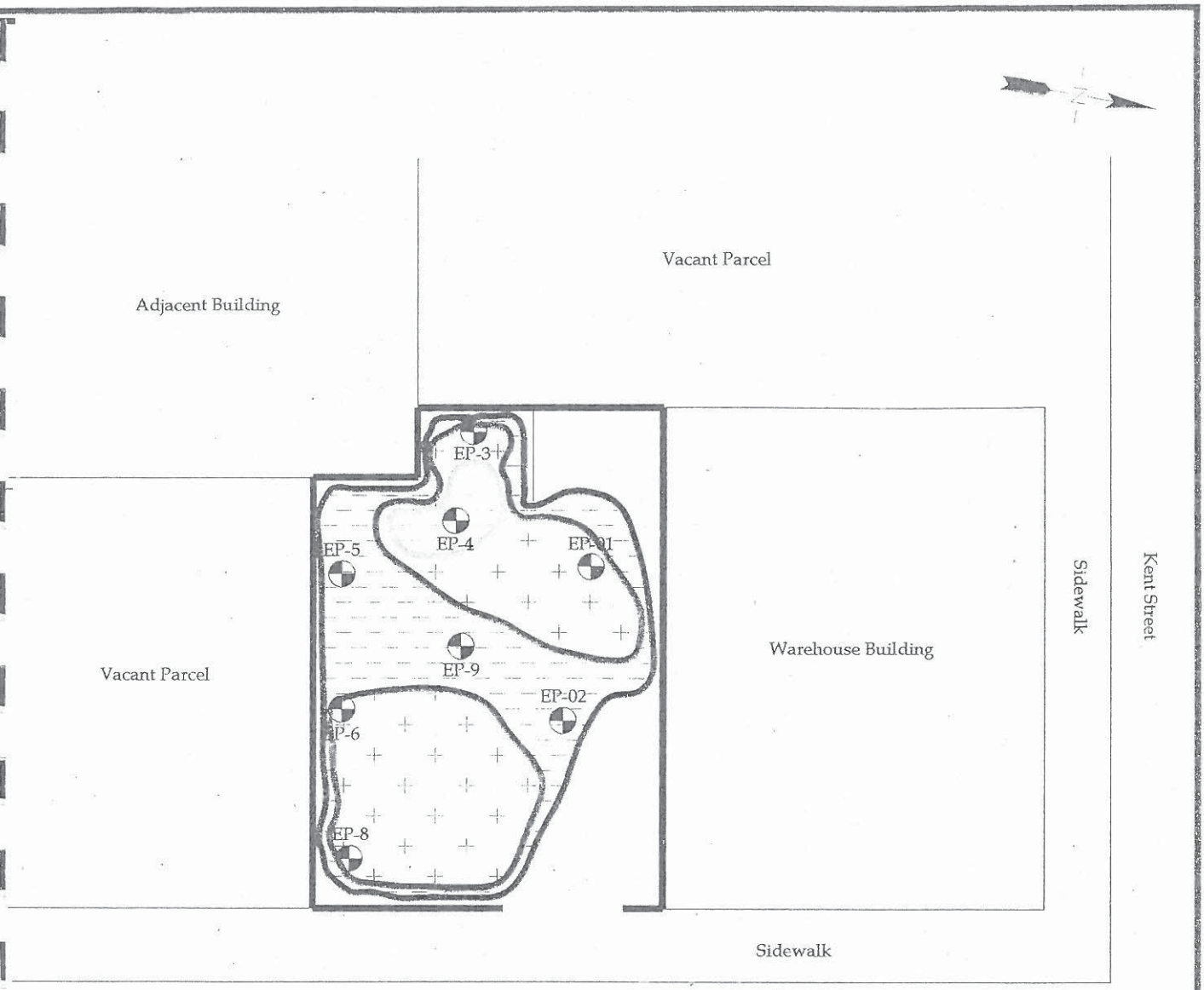
Safeway Construction
105 West Street
Brooklyn, New York

EPA Method 8270 Results for 2' - 5' Layer

Compound	Concentration	AGV	SCO	Compound	Concentration	AGV	SCO
Acenaphthene	14000		90000	4,6-Dinitro-2-methylphenol	ND		NA
Acenaphthylene	3100	1000	41000	2,4-Dinitrophenol	ND		200
Anthracene	18000		700000	2,4-Dinitrotoluene	ND		1000
Benzo(a)anthracene	43000	0.04	3000	2,6-Dinitrotoluene	ND		NA
Benzo(b)fluoranthene	41000	0.04	1100	Di-n-octylphthalate	ND		120000
Benzo(k)fluoranthene	26000		1100	Fluoranthene	59000	1000	1900000
Benzo(g,h,i)perylene	17000	0.04	800000	Fluorene	15000	1000	350000
Benzo(a)pyrene	41000	0.04	11000	Hexachlorobenzene	ND		1400
Benzyl alcohol	ND		NA	Hexachlorobutadiene	ND		NA
Bis(2-chloroethoxy)methane	ND		NA	Hexachlorocyclopentadiene	ND		NA
Bis(2-chloroethyl)ether	ND		NA	Hexachloroethane	ND		NA
Bis(2-chloroisopropyl)ether	ND		NA	Indeno(1,2,3-cd)pyrene	19000	0.04	32000
Bis(2-ethylhexyl)phthalate	8800		435000	Isophorone	ND		4400
4-Bromophenyl phenyl ether	ND		NA	2-Methylnaphthalene	6000		36400
Butyl benzyl phthalate	ND		122000	2-Methylphenol	ND		100
4-Chloroaniline	ND		NA	4-Methylphenol	ND		900
2-Chloronaphthalene	ND		NA	Naphthalene	22000	200	13000
4-Chloro-3-methyl phenol	ND		NA	2-Nitroaniline	ND		430
2-Chlorophenol	ND		NA	3-Nitroaniline	ND		NA
4-Chlorophenly phenyl ether	ND		NA	4-Nitroaniline	ND		NA
Chrysene	38000	0.04	400	Nitrobenzene	ND		200
Dibenz(a,h)anthracene	3900	1000	1.65E+08	2-Nitrophenol	ND		330
Dibenzofuran	12000		6200	4-Nitrophenol	ND		100
Di-n-butylphthalate	ND		8100	N-Nitrosodiphenylamine	ND		NA
1,3-Dichlorobenzene	ND		1600	N-Nitrosodi-n-propylamine	ND		NA
1,4-Dichlorobenzene	ND		8500	Pentachlorophenol	ND		1000
1,2-Dichlorobenzene	ND		7900	Phenanthrene	69000	1000	220000
3,3-Dichlorobenzidine	ND		NA	Phenol	ND		30
2,4-Dichlorophenol	ND		NA	Pyrene	83000	1000	665000
Diethylphthalate	ND		7100	1,2,4-Trichlorobenzene	ND		NA
2,4-Dimethylphenol	ND		NA	2,4,5-Trichlorophenol	ND		100
Dimethylphthalate	ND		2000	2,4,6-Trichlorophenol	ND		NA

All concentrations are reported in micrograms per kilogram (ug/kg).
ND - Not detected
AGV - Alternative Guidance Values
SCO - Soil Cleanup Objective

Attachment 5



Legend

EP-01 End Point Sampling Location

Limits of Excavation to Two (2) Feet Below Grade

Limits of Excavation to Four (4) Feet Below Grade

Hydro Tech Environmental Corp.
2171 Jericho Turnpike, Suite 150A
Commack, New York 11725
Phone: (631) 462-5866 Fax: (631)462-5877
www. hydrotechenvironmental.com

Figure 4: Extent of Excavation

Scale: 1inch = 20 feet	Job No.: 012015
Drawn by: MR	Client No.: 01110
Approved By: ME	Geologist: MR
File Name: excavation.dwg	Date: 01/25/02

Vacant Lot

101, 105 & 107 West Street
Brooklyn New York